

Amendments to the Claims

This listing of claims will replace all prior versions, and listings of claims in the application:

Listing of Claims:

Claim 1 (Currently Amended): An interactive speech interface unit comprising:

a speech recognizer that recognizes ~~recognition means for recognizing~~ input speech of user utterance and converts ~~converting~~ the recognized input speech into a character string[[,]];

an input statement analyzer that analyzes ~~analysis means for analyzing~~ the character string and converts ~~converting~~ the analyzed character string into semantic representation[[,]];

an interactive controller that controls ~~control means for controlling~~ flow of an interactive status and accessing an application, the interactive controller putting series of interactive sequences having calling relations together in a plurality of interactive tasks having an upper interactive task and a lower interactive task in a hierarchical structure, the interactive controller modifying one of the interactive sequences in an upper interactive task in accordance with a lower interactive task;

an output statement generator that generates ~~generation means for generating~~ an intermediate language to be output ~~outputted~~ to the user[[,]];

a speech generator that converts ~~generation means for converting~~ the

intermediate language into speech and outputs ~~outputting~~ the speech[, and]];

an application interface that accesses an ~~means for accessing the~~ application using the semantic representation output ~~outputted~~ from the interactive controller ~~control means~~; and

~~wherein the interactive control means puts series of interactive sequences having calling relations together in a plurality of interactive tasks in association with relations and includes an interactive task hierarchical data base~~ database that stores ~~for storing the interactive tasks~~ including the modified interactive sequence in a hierarchical structure.

Claim 2 (Original): The interactive speech interface unit according to Claim 1, wherein lower interactive tasks in the hierarchical structure are prepared to include all sub-interactive sequences which are needed for an upper interactive task.

Claim 3 (Currently Amended): The interactive speech interface unit according to Claim 1, further comprising an interactive task chaining part that executes ~~means for~~ ~~extracting~~ an upper/lower chain of the interactive tasks during execution of a dialog and dynamically ~~switching~~ switches interactive sequences.

Claim 4 (Currently Amended): The interactive speech interface unit according to Claim 1, wherein the interactive controller ~~control means~~ further comprises a

keyword/bookmark catalog interactive sequence storage ~~[[means]]~~, a keyword/bookmark storage ~~[[means]]~~, a user interactive sequence catalog interactive sequence storage ~~[[means]]~~, and a user interactive sequence storage ~~[[means]]~~, whereby catalog functions of the interactive sequences by a user are added so as to change flow of a dialog by the user.

Claim 5 (Currently Amended): The interactive speech interface unit according to Claim 4, wherein the interactive controller ~~control means~~ receives the semantic representation including a recognized character string from the input statement analyzer ~~analysis means~~, ~~deciding as to~~ decides whether a keyword corresponding to a present interactive status is included in the recognized character string, and adds ~~adding~~ an interactive sequence using the keyword if the keyword is included in the recognized character string.

Claim 6 (Original): The interactive speech interface unit according to Claim 3, wherein the switching of the interactive sequences is implemented by describing and rewriting the interactive sequence as an action of an interactive procedure.

Claim 7 (New): An interactive speech interface system comprising:

a speech recognition part receiving speech from a user, the speech recognition part converting the input speech into a character string;

an analysis part coupled to the speech recognition part, the analysis part analyzing the character string received from the speech recognition part and converting the received character string into a semantic representation;

an interactive task hierarchical database storing a plurality of interactive tasks each of which includes an interactive sequence in a hierarchical structure so that the interactive tasks include an upper interactive task and a lower interactive task;

an interactive sequence memory storing the interactive sequence;

an interactive controller coupled to the analysis part, the interactive task hierarchical database and the interactive sequence memory, the interactive controller providing an interactive task in response to the semantic representation, modifying the interactive sequence in the upper interactive task of the interactive task in response to the lower interactive task of the interactive task, and providing the lower interactive task with the modified interactive sequence;

an output statement generation part coupled to the interactive controller, the output statement generation part generating an intermediate language in response to the interactive task provided by the interactive controller; and

a speech generator coupled to the output statement generation part, the speech generator converting the intermediate language into speech and outputting the speech.

Claim 8 (New): The interactive speech interface system according to claim 7, further comprising a speech recognition database coupled to the speech recognition part, the

speech recognition database storing information used for the speech recognition.

Claim 9 (New): The interactive speech interface system according to claim 7, further comprising an input statement analysis database coupled to the analysis part, the input statement analysis database storing information used for the analysis of the character string.

Claim 10 (New): The interactive speech interface system according to claim 7, further comprising an output statement analysis database coupled to the output statement generation part, the output statement analysis database storing information used for the generation of the intermediate language.

Claim 11 (New): The interactive speech interface system according to claim 7, further comprising:

an application receiving a command and providing a result in response to a treatment of the application; and

an application interface part coupled between the interactive controller and the application, the application interface part providing the command to the application in response to the semantic representation delivered from the interactive controller and converting the result provided by the application into the semantic representation.

Claim 12 (New): The interactive speech interface system according to claim 7, further comprising an interactive task chain part coupled between the interactive controller and the interactive task hierarchical database, the interactive task chain part fetching a chain of the interactive tasks delivered from the interactive task hierarchical database and replacing the interactive tasks.

Claim 13 (New): The interactive speech interface system according to claim 7, further comprising:

a keyword memory coupled to the interactive controller for storing a keyword;
and

a keyword registration interactive sequence memory coupled to the interactive controller for storing an interactive sequence for registration of the keyword.

Claim 14 (New): The interactive speech interface system according to claim 7, further comprising:

a bookmark memory coupled to the interactive controller for storing a bookmark;
and

a bookmark registration interactive sequence memory coupled to the interactive controller for storing an interactive sequence for registration of the bookmark.